

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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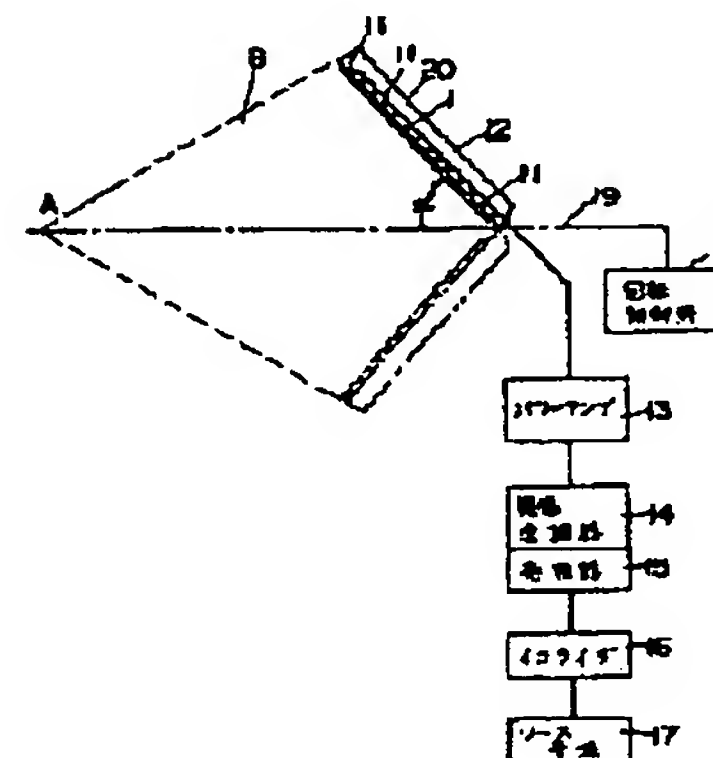
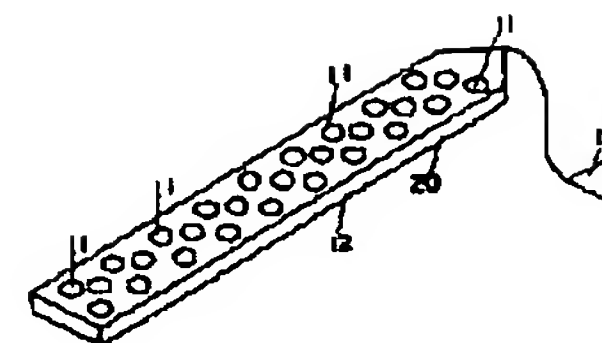
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TITLE : PARAMETRIC SPEAKER



ABSTRACT : PURPOSE: To send an audible band to a specific party only by tilting a speaker section around one end of the speaker section so that a face with an ultrasonic wave oscillator mounted thereon is directed inward with respect to a rotary shaft and turning the speaker section while the tilt angle is freely revised.

CONSTITUTION: Lots of ultrasonic wave oscillators 11 are arranged on one side of a plate (or rod) base 20 to constitute a speaker section 12 and one end of the speaker section 12 is connected to a rotary shaft 19 and the speaker section 12 is turned while being tilted by a prescribed angle  $\alpha$  with respect to the rotary shaft 19 in a way that the face the ultrasonic wave oscillators mounted thereon is directed inward. The output of a sound source 17 at an audible frequency band enters an amplitude modulator 14 through an equalizer 16 and amplitude-modulated by using a frequency of an ultrasonic wave band of the oscillator 15 as a carrier, amplified by a power amplifier 13 to drive the ultrasonic wave oscillators 11. The speaker section 12 draws a rotary cone with high speed revolution and the power of the sound wave radiating from the ultrasonic wave vibrators 11 of the speaker section 12 is concentrated on the vicinity of a point A. The point A is made remote from the speaker section 12 when the angle  $\alpha$  is increased and made close thereto when angle  $\alpha$  is decreased.

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